

Resistograph Tree Report

For

Vivid Housing Limited



At

45,

Mallard Road,

Bursledon,

Hampshire,

SO31 8EH



A trading name of RG Consultancy Ltd

**Prepared by
Richard Daubeney Our Ref 0624-RD
26th June 2024**

1.0 Introduction.

- 1.1 Ruskins Tree Consultancy have been instructed by Vivid Housing Limited to undertake resistograph decay detection to T1 English oak tree growing at No.45 Mallards Road, Bursledon. The Resistograph inspection was undertaken by Richard Daubeny who visited the site on 26/06/24.

2.0 The Benefits of Trees

- 2.1 Trees have many benefits are integral to natural ecosystems, providing a wide range of related benefits to humankind (ecosystem services), including mitigating the harmful effects of climate change. Trees are an important part of the economy, providing timber and non-timber forest products.
- 2.2 With urban trees these benefits can often be amplified with trees contributing to the landscape and character of an area, creating a sense of place with mature trees providing a link to the past. They help reduce the impacts of extreme weather by providing shade and intercepting rainfall, help reduce air pollution by removing particulates, help absorb CO₂ whilst providing habitat for wildlife and associated bio-diversity benefits.
- 2.3 Trees can also contribute to society by having a positive impact on health, reducing anti-social behaviour and having a positive impact on the quality and value of the built environment.
- 2.4 Their importance is recognised in national and local government policies, and many non- governmental organisations have policies dedicated to conserving trees and their biodiversity.

3.0 The risks from trees

- 3.1 The risk, per tree, of causing fatality is around one in 150 million for all trees in Britain or one in 10 million for those trees in, or adjacent to areas of public use. This is clearly significantly less than the 1 in 1 million thresholds that the Health and Safety Executive (HSE) considers 'broadly acceptable', within the Tolerability of Risk Framework.
- 3.2 The HSE have developed the Tolerability of Risk Framework which has been incorporated into the National Tree Safety Group (NTSG) guidance. Risks above 1/10,000 per annum are generally considered unacceptable when placed on the public. Risks between 1/10,000 and 1/1,000,000 per annum are tolerable, but consideration should be given to managing them 'as low as reasonably practicable' (ALARP), where it is cost effective to do so.
- 3.3 This risk therefore represents an extremely small proportion of the background risk that we commonly accept in our everyday lives, and the ongoing removal and general management of trees is probably the most important factor in keeping this figure at such a low level. However, there can be pressure to remove trees because of a perception of risk, which may be much greater than any actual risk a tree poses.
- 3.4 Trees are growing dynamic structures. No tree is ever absolutely safe due to the unpredictable laws and forces of nature. As a result of this, natural failure of intact trees will occur; extreme climatic conditions can cause damage to even apparently healthy trees.

4.0 Statutory Protection of Trees.

- 4.1 We have been informed that there is a Tree Preservation Order in place and no Conservation Area protection relating to the English oak T1 at this site for Eastleigh Borough Council. (TPO 791-E)
- 4.2 Before any tree works are carried out the presence of Tree Preservation Orders (TPO) or Conservation Area status should be established with the Local Planning Authority and permission obtained from the tree owners if required.
- 4.3 All tree works should be carried out by qualified, trained and fully insured operators in accordance with BS 3998: 2010 'Recommendations for Tree Works'.

5.0 Tree Inspections

- 5.1 To maintain trees in a reasonable condition and reduce the risk of personal injury to acceptable levels trees should be inspected by a suitably trained and competent person using the Basic or Professional Level tree surveying methodology, which can be undertaken by an arboriculturist as set out by LANTRA utilising visual tree assessment (VTA) methodology (Lonsdale 1999).
- 5.2 Where the visual tree assessment finds features that merit further inspection then the tree should be inspected using appropriate methodology. This might range from climbing inspections, root collar excavations to use of Resistograph and/or tomographs to help determine the structural integrity of the wood within the tree. For the trees at this site our VTA identified issues that we considered should be assessed by use of a resistograph.
- 5.3 Following the testing of the T1 English oak tree it showed areas of significant decay within the stem. This is highlighted within readings 5 and 8, which were positioned either side of the cavity area, this was carried out to demonstrate the sound live wood available centered around the cavity area. Both readings 5 and 8 showed little in terms of sound residual holding wood and the significant areas of decayed wood present within the stem. Reading No.6 also demonstrated areas of moderate decayed wood within the stem, but however there is also sound holding wood within this reading. The remaining readings showed significant area of decayed wood present within the stem. The cavity on the stem currently has a fruiting body *Laetiporus sulphureus* (Chicken of the woods) bracket, which is fresh in appearance. (See below for further information on this fungus) The large cavity with internal decay at 1.2m to the West side of stem shows moderate reaction wood surrounding the cavity. The tree has large standing deadwood present throughout the canopy.

- 5.4 The following comment is from 'The Principles of Tree Hazard Assessment and Management' by David Lonsdale (DTLR/Forestry Commission 1999 (Page 119 *Laetiporus sulphureus*):
- 5.5 *'Eventually, a large proportion of wood in the main stem or in the roots tend to be decayed by this fungus, leading to snapping or windthrow. In trunks, the undecayed sapwood can provide adequate support, especially in the case of Robina pseudoacacia in which the sapwood band is particularly narrow. The fungus can therefore cause a serious hazard, although trees may remain relatively safe for many years until decay becomes extensive. It can also cause problems in structural timbers, probably because its resting spores can survive the dry conditions that occur when the timber is seasoned'*

6.0 Conclusion

- 6.1 Following the results of T1 English oak tree mentioned within this report, we now provide our conclusions.
- 6.2 The English oak tree T1 showed that although there is evidence of some residual sound wood present within the stem around the section of the cavity and below the cavity at ground level, however the readings do also show that there are significant areas of dysfunctional wood present within the stem which would not only link to the cavity but also the likely the presence of the fruiting body attachment. This then turns to the tree overall and its setting, with consideration of the tree location with multiple targets such as building, garden and general public all within striking distance of the tree, the tree at its current height and spread is likely placing considerable pressure to the lower section of the stem mainly around the cavity and rooting area of the tree. In our opinion the English oak has a significant risk of stem failure. We therefore recommend that the T1 English oak tree is reduced in height to 8-10m above ground level. Reducing this tree will ensure that the tree can be retained with a more compact size and limiting the risks to the targets surrounding the tree.

We recommend these tree works is carried out within 3 months from the date of this report.

- 6.3 All work to date is to be undertaken within the requirements of the tree table work schedule. The tree listed in this report to be reinspected as outlined within the tree table.



Richard Daubeney
Arboricultural Consultant
26th June 2024

Tree Data

Tree No. Tree Tag.	Tree Species	Hgt (m)	Past Management	Age Class	Risk Target	Defects	Works	Work Priority
T1 Tree tag: N/A	English oak	20-25m	No significant recent management noted.	Mature	High/ reinspect in 2027	Gross Defect Noted Large cavity on stem at 1.2m to the West. With fruiting body of <i>Laetiporus sulphureus</i> (Chicken of the woods) located within the cavity, fresh in appearance. The cavity when tapped with sounding hammer is hollow sounding. Co dominant stems at 9m above ground level. Deadwood throughout canopy. Crown weighted towards Southeast due to tree group pressure from North and West.	Reduce to 8-10m above ground level. Tree works to BS3998 (2010)	Urgent Within 3 months

Photographs

**T1 English oak tree looking East towards cavity and
Laetiporus sulphureus fungus bracket.**



**T1 English oak tree looking South towards drill
location No.5**



**T1 English oak looking to North towards Drill
location No.8**

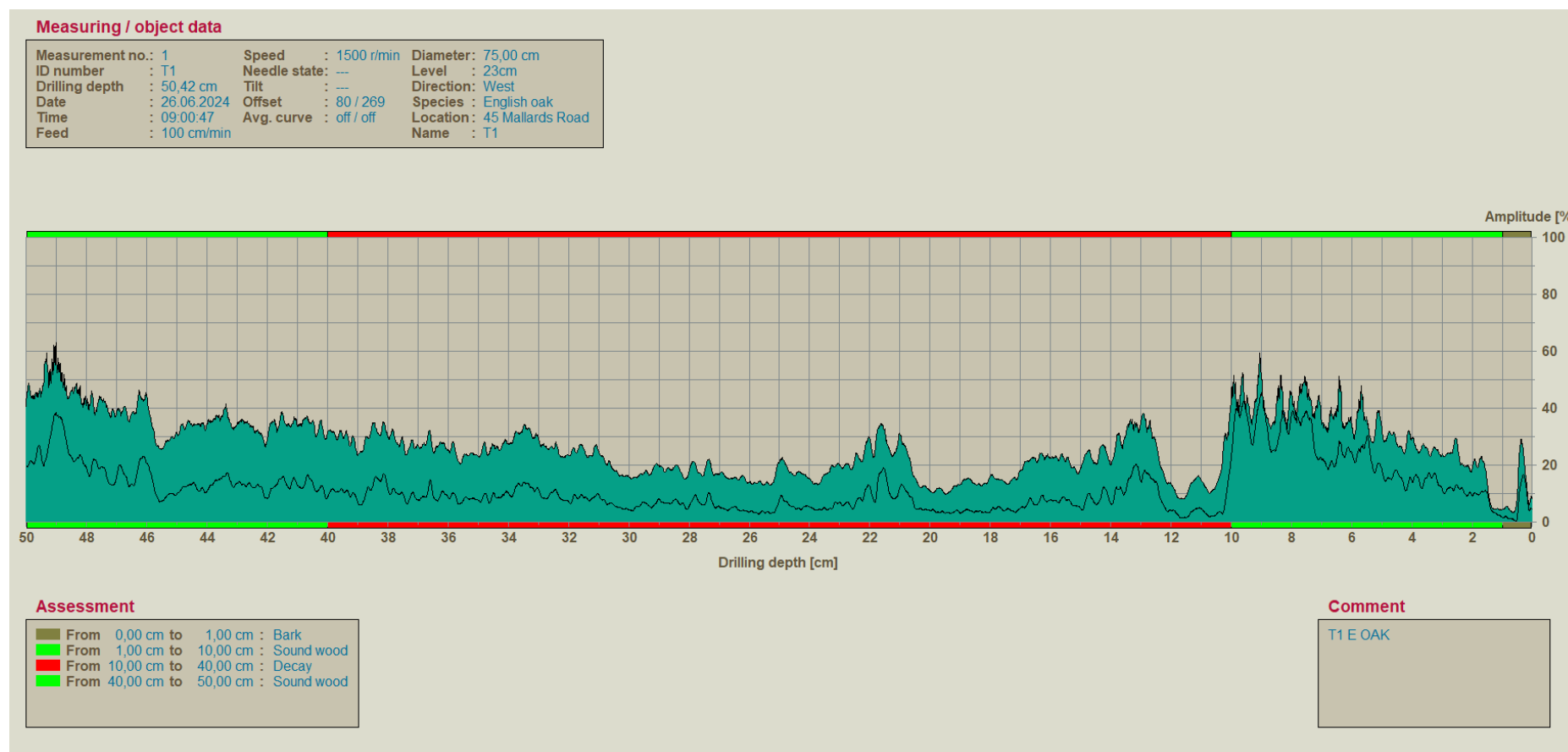


T1 English oak looking South



Resistograph Readings

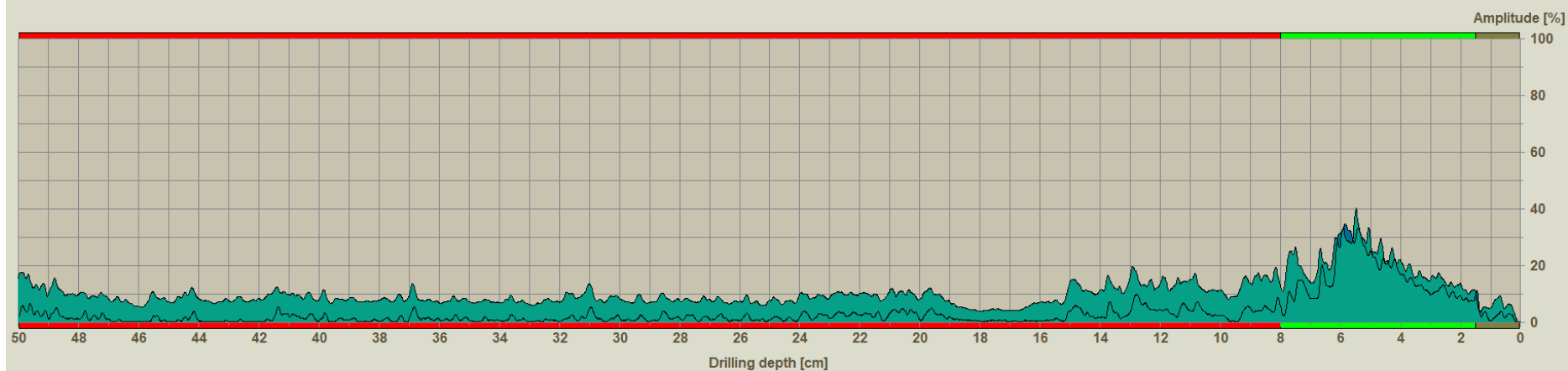
T1 English oak Measurement 1



T1 English oak Measurement 2

Measuring / object data

Measurement no.:	5	Speed :	2500 r/min	Diameter:	73,00 cm
ID number :	T5	Needle state:	---	Level :	1.28m
Drilling depth :	50,42 cm	Tilt :	---	Direction:	North
Date :	26.06.2024	Offset :	61 / 302	Species :	English oak
Time :	09:10:46	Avg. curve :	off / off	Location :	45 Mallards Road
Feed :	50 cm/min			Name :	T1



Assessment

From 0,00 cm to 1,50 cm :	Bark
From 1,50 cm to 8,00 cm :	Sound wood
From 8,00 cm to 50,00 cm :	Decay

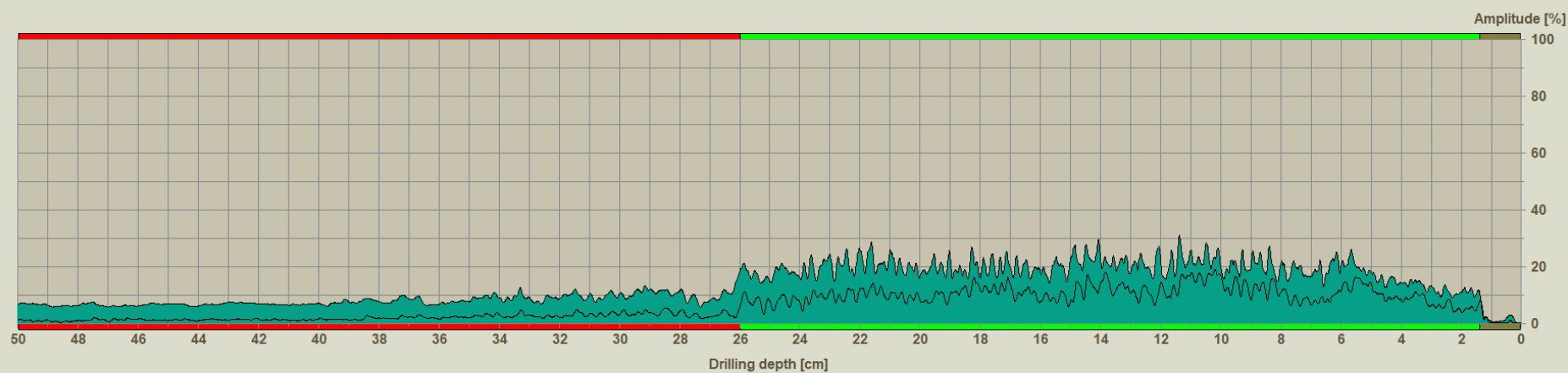
Comment

T1 E OAK

T1 English oak Measurement 3

Measuring / object data

Measurement no.:	6	Speed	: 2000 r/min	Diameter:	73,00 cm
ID number	: T6	Needle state:	---	Level	: 1.4m
Drilling depth	: 50,42 cm	Tilt	: ---	Direction:	East
Date	: 26.06.2024	Offset	: 58 / 287	Species	: English oak
Time	: 09:13:27	Avg. curve	: off / off	Location	: 45 Mallards Road
Feed	: 50 cm/min			Name	: T1



Assessment

From	0,00 cm	to	1,40 cm	:	Bark
From	1,40 cm	to	26,00 cm	:	Sound wood
From	26,00 cm	to	50,00 cm	:	Decay

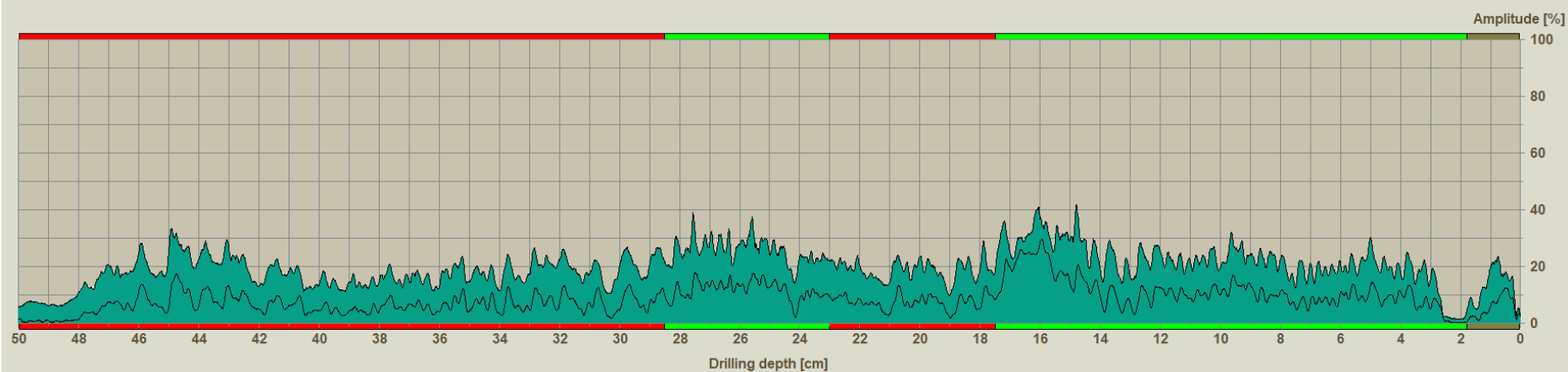
Comment

T1 E OAK

T1 English oak Measurement 4

Measuring / object data

Measurement no.:	8	Speed	: 2000 r/min	Diameter:	73,00 cm
ID number	: T8	Needle state:	---	Level	: 1,35m
Drilling depth	: 50,41 cm	Tilt	: ---	Direction:	South
Date	: 26.06.2024	Offset	: 72 / 286	Species	: English oak
Time	: 09:16:12	Avg. curve	: off / off	Location:	45 Mallards Road
Feed	: 100 cm/min			Name	: T1



Assessment

From	0,00 cm	to	1,80 cm	:	Bark
From	1,80 cm	to	17,50 cm	:	Sound wood
From	17,50 cm	to	23,00 cm	:	Decay
From	23,00 cm	to	28,50 cm	:	Sound wood
From	28,50 cm	to	50,00 cm	:	Decay

Comment

T1 E OAK

Site Plan

